



PUNCTUAL CMV heat recovery units,
residential murals

VMC PUNTUALE 25 - 50



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14. INTRODUCTION

This manual indicates the intended use of the unit and provides instructions for transporting, installing, assembling, adjusting and using the unit. Provides information for maintenance interventions and residual risks and personnel training.

The user and maintenance manual must be read and used as follows:

- Each operator assigned to use or maintain the unit must read this manual completely and with the utmost attention and respect what is reported;
- The employer has the obligation to ascertain that the operator possesses the aptitude requirements for running the unit and has carefully read the manual; The employer must also accurately inform the operator about the risks of accidents and in particular about the risks deriving from noise, about the personal protective equipment provided and about the general accident prevention rules established by international laws or standards and those of the country of destination of the unit;
- The manual must always be available to the user, those in charge, those in charge of transport, installation, use, maintenance, repair and final dismantling;
- Keep the manual in areas protected from humidity and heat and consider it an integral part of the unit for its entire life, handing it over to any other user or subsequent owner of the unit;
- Make sure that any updates you receive are incorporated into the text;
- Do not damage, remove, tear or rewrite the manual or parts of it for any reason, if it is lost or partially damaged and therefore it is no longer possible to read its contents completely, it is recommended to request a new manual from the manufacturer by communicating the serial number of the machine on the data plate.

Pay close attention to the following symbols. Their function is to highlight particular information such as:



With reference to serious dangerous situations that can occur with the use of the unit to ensure people's safety.



With reference to dangerous situations that can occur with the use of the unit to avoid damage to things and to the unit itself.



With reference to additions or suggestions for the correct use of the unit.

The manufacturer has the right to update the production and manuals, without the obligation to update previous versions, except in special cases.

This manual reflects the state of the art at the time the unit was marketed and cannot be considered inadequate just because it has subsequently been updated according to new technologies.

To request any updates or additions to the user manual, which will be considered an integral part of the manual, forward the request to the addresses indicated in this manual.

Contact the manufacturer for further information and for any suggestions for improving the manual.

In case of transfer of the unit, the manufacturer invites you to report the address of the new owner to facilitate the transmission of any additions to the manual to the new sender.

14.1 RESPONSIBILITY



The unit is guaranteed according to the contractual agreements made at the sale.

The manufacturer considers itself exonerated from any liability and obligation, and the form of guarantee provided for in the sales contract becomes void for any accident to people or things that may occur due to:

- non-observance of the instructions given in this manual as regards operation, use, maintenance and events in any case unrelated to the normal and correct use of the unit;
- modifications made to the unit and to the safety devices without prior written authorization from the manufacturer;
- attempted repairs carried out on your own or by unauthorized technicians;
- lack of periodic and constant maintenance interventions or use of non-original spare parts.

In any case, if the user attributes the accident to a defect in the unit, he must demonstrate that the damage occurred was a principal and direct consequence of this "defect".

14.2 SERVICE STANDARDS

The service standards described in this manual form an integral part of the supply of the unit. Furthermore, these standards are intended for the operator who has already been expressly trained to operate this type of unit and contain all the necessary and indispensable information for safe operation and optimal use of the unit.

Hasty and incomplete preparations force improvisation and this is the cause of many accidents.

Read carefully and scrupulously respect the following suggestions:

- **The first start-up must be carried out exclusively by qualified personnel;**
- At the time of installation or when it is necessary to work on the unit, it is necessary to scrupulously comply with the rules given in this manual, observe the indications on the unit and in any case apply all the necessary precautions;
- Possible accidents to people and things can be avoided by following these technical instructions compiled with reference to the machinery directive 2006/42/CE and subsequent additions. In any case, always comply with national safety standards;
- Do not remove or damage the protections, labels and writings, especially those required by law and, if no longer legible, replace them.



The Machinery Directive 2006/42/EC gives the following definitions:

DANGEROUS AREA: any area inside and/or near a machine in which the presence of an exposed person constitutes a risk to the safety and health of the same.

EXPOSED PERSON: any person who is wholly or partially in a dangerous area. OPERATOR: the person or persons in charge of installing, operating, regulating, carrying out maintenance, cleaning, repairing and transporting the machine.



All operators must comply with the international accident prevention regulations and those of the country of destination of the unit in order to avoid possible accidents.

The European Community has issued a number of directives concerning the safety and health of workers, including directives 89/391/EEC, 89/686/EEC, 89/654/EEC, 89/655/EEC, 89/656/EEC, EEC, 86/188/EEC, 92/58/EEC and 92/57/EEC which each employer has the obligation to respect and to have respected.

The units have been designed and built according to the current state of the art and the technical rules in force. The laws, provisions, prescriptions, ordinances, directives in force for these machines have been complied with. The materials used and the parts of the equipment, as well as the production, quality assurance and control processes meet the highest demands for safety and reliability.

By using them for the purposes specified in this user manual, operating them with due diligence and carrying out accurate maintenance and state-of-the-art overhauls, continuous and long-lasting performance and functionality of the units can be maintained.

14.3 INTERVENTIONS AND MAINTENANCE

The user manual can never replace adequate user experience; for some particularly demanding maintenance operations, this manual is a reminder of the main activities to be carried out for operators with specific training acquired, for example, by attending training courses at the manufacturer.

Read the following tips carefully:

- Constant and accurate preventive maintenance always guarantees the high operational safety of the unit. Never postpone necessary repairs and have them carried out only and exclusively by specialized personnel, using only original spare parts;
- The operator's workplace must be kept clean, tidy and free from objects that may restrict free movement.
- Operators must avoid clumsy operations, in awkward positions that can compromise their balance.

- The workplace must be adequately lit for the foreseen operations. Insufficient or excessive lighting can lead to risks.
- Any intervention on the unit must be carried out by qualified personnel;
- Before carrying out any intervention or maintenance on the unit, make sure you have cut off the power supply;
- Make sure that the safety devices work correctly and that there are no doubts about their operation; otherwise, do not start the unit under any circumstances;
- Use only tools prescribed by the manufacturer of the unit. To avoid personal injury, do not use worn or damaged, low-quality or improvised tools;
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities or lack of experience and knowledge, unless they have been given supervision or instructions relating to use of the appliance by of a person responsible for their safety
- children must be supervised to ensure that they do not play with the appliance
- precautions must be taken to avoid the backflow of gas into the room from the open gas flue or other combustible appliances



- once the unit has been cleaned, the operator must check that there are no worn or damaged parts or parts that are not firmly fixed, otherwise ask for the intervention of the maintenance technician;

- The use of flammable fluids in cleaning operations is prohibited.

Do not use diesel, petrol or solvents to clean the unit as the former leave an oily film which favors the adhesion of dust, while solvents (even if weak) damage the paint and therefore favor the formation of rust. If a jet of water enters electrical equipment, in addition to oxidizing the contacts, it may cause malfunction of the unit. For this reason, do not use jets of water or steam on sensors, connectors or any electrical part.

14.4 INTENDED USE

These units are punctual heat recovery units (room by room), to be installed on the perimeter wall, which allow a room to be ventilated without ducting and without dispersing heat with the emission of exhausted air. Their use is recommended within the operating limits indicated in this manual.



Position the unit in environments where there are no dangers of explosion, corrosion, fire and where there are vibrations and electromagnetic fields. It is also prohibited to operate in a manner different from that indicated or to neglect operations necessary for safety.

14.5 GENERAL SAFETY RULES

Wear protective clothing

Each operator must use personal protective equipment such as gloves, helmet to protect the head, safety goggles, safety shoes, noise protection headphones.



Fire extinguisher and first aid

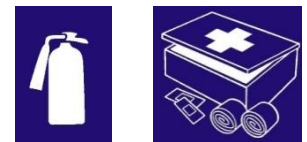
Place a first aid kit and a fire extinguisher near the unit.

Periodically make sure that the fire extinguishers are loaded and that the method of use is clear.

In case of fire, use it according to the regulations in force and contact the fire brigade.

Periodically check that the first aid kit is complete.

Make sure you have first aid telephone numbers nearby.



The provision of a fire extinguisher and first aid kit is the responsibility of the owner of the building where the unit is installed.



Warnings for checks and maintenance

Put up a sign that reads: "UNDER MAINTENANCE" on all sides of the unit.
Check the unit carefully by following the list of operations in this manual.

Safety tags



General alarm Electric voltage Danger of burns Moving parts Cut wounds

15. PRODUCT DESCRIPTION

VMC PUNTUALE recovery are designed to ventilate apartments, hotels, bars and any other civil, residential and commercial environment in a controlled way.

The unit is equipped with a very high efficiency ceramic heat exchanger which allows fresh air to be introduced into the room and heat to be recovered from the previously expelled exhaust air.

The VMC PUNTUALE recovery combine cutting-edge technical solutions with a pleasant aesthetic, thanks to the elegant external covers.

VMC PUNTUALE is designed to be mounted in external walls with a thickness of 280 mm to 500 mm. Special extensions allow greater thicknesses to be overcome (see paragraph: DUCT FOR THICK WALLS).

The low speed of the air avoids the annoying drafts of traditional air conditioning systems and guarantees maximum environmental comfort.

The exclusive use of top-quality parts in the aeraulic and electrical parts puts the VMC PUNTUALE units at the highest levels of the state of the art, in terms of efficiency, reliability and sound power emitted.

VMC PUNTUALE is equipped with an automatic anti-wind damper as required by the CE 13141-8 Standard

15.1 STRUCTURE AND OPERATION

The unit is made up of: an internal unit, a central body, an external hood and a duct with insulation. The internal unit presides over the operation, the central body contains the exchanger, the fan and the filters, the external hood protects from the rain.

The two filters and the central body are inserted in the duct. The filters purify the new air and prevent the entry, from the outside, of objects that could damage the exchanger or fan.

The unit is equipped with a non-volatile memory clock, which signals the opportunity to check the filters every 2000 hours of operation, with the lighting of a LED, located on the left side of the unit. Once the filters have been replaced and the controller reset, the LED will remain off until another 2000 hours of operation have elapsed.

The hexagonal cell heat exchanger recovers the heat from the exhausted air, to heat the air introduced into the room.

A shutter closes automatically when the appliance is in stand-by, to prevent unwanted drafts.

The ventilation unit must be installed in places where it is not possible for water or other substances to enter which could damage its components.

VMC PUNTUALE (in models 50 and 25) can work in different modes:

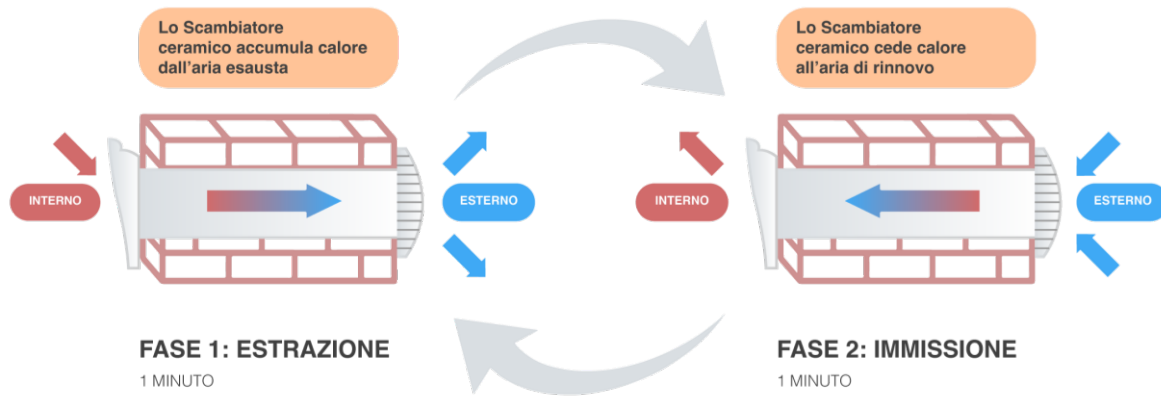
Extraction: the unit operates permanently in extraction mode.

Input: the unit operates permanently in input.

Home mode: the unit operates alternately in two phases of approximately 60 seconds each:

Night time mode: if activated, the speed is reduced to the "Super minimum" level so that the air exchange continues, without producing noise. The pre-set ventilation is automatically reactivated as the brightness increases.

Humidity mode: if activated, the ventilation rises to the maximum level, as long as the ambient humidity remains higher than the set value.



15.2 OPERATIONAL LIMITS

The recovery unit must be used with temperatures between -20° and $+40^{\circ}$, with relative humidity lower than 97%.

If installed in poorly lit locations, the "night" mode may not be usable.

15.3 MODELS

The recovery units are produced in two models, one with a max flow rate of 50 m³/h, the other with a max flow rate of 25 m³/h, which can be inserted respectively in holes in the walls of 162 mm and 102 mm.

16. OPERATION OF SEVERAL DEVICES CONNECTED TO EACH OTHER

When several appliances are installed in a single room, their operation must be synchronized so as not to put pressure or depression in the room. The appliances must be connected in cascade to each other (see specific chapter), so that when half of them work in extraction (phase 1), the other half work in injection (phase 2).

With cascade connection, a single remote control, which operates on the first device, called "Master", is sufficient to manage all the other "Slaves".

Appliances operating in different rooms can also be connected in cascade, provided that they have similar needs and it is useful to manage them with a single command.

The maximum number of recuperators that can be connected in cascade is ten pieces.

17. ELECTRICAL CIRCUITS

17.1 ELECTRICAL EQUIPMENT

All electrical and electronic equipment is made and wired in compliance with low voltage and electromagnetic compatibility standards for domestic use applications.

The fans, equipped with low consumption reversible EC motors with adjustable flow rate, are extremely silent. Once the fan has been installed in the suitably prepared hole (see paragraph 9.4), connect an electrical outlet (110-240 Vac ~ 50-60 Hz).

18. BUTTONS AND REMOTE CONTROL FOR UNIT MANAGEMENT

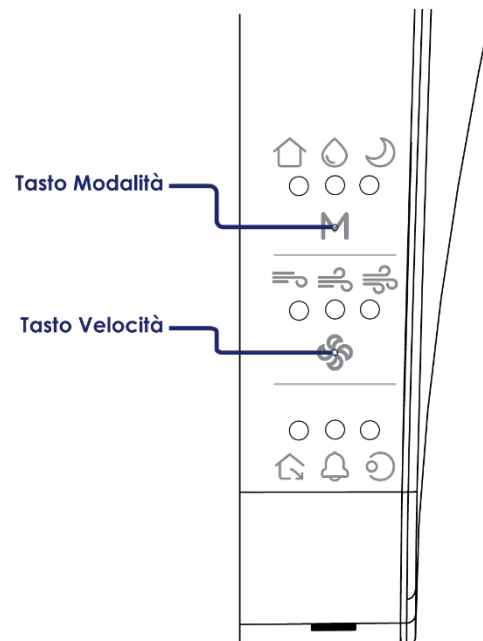
The unit can be controlled with buttons located on the fan or with a remote control.








18.1 BUTTONS ON BOARD THE MACHINE

The on-board buttons are located on the left side of the device, they are touch-sensitive: just place your finger to control them.

If several devices connected in cascade are installed, only the first (master) accepts the commands, whether they come from the buttons on the machine or from the remote control.

All other devices (slaves) are controlled by the master.



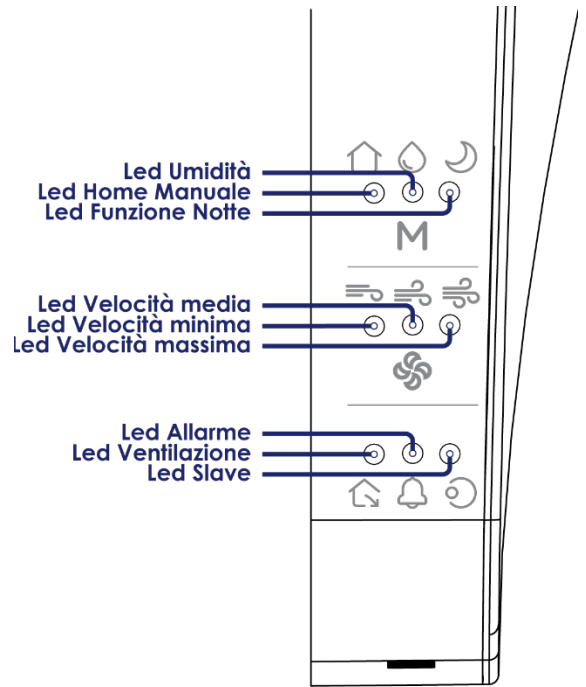
Key	Description	Function
M	Mode	<p>The button M allows you to choose the operating mode:</p> <ul style="list-style-type: none"> • Home manual – Heat recovery active (Led “” switched on) • Night function active (LED “” switched on) • Device shutdown <p>Pressing key returns to the manual Home function</p>
	Speed	<p>This key allows you to choose the operating speed of the fan in manual Home and ventilation modes:</p> <ul style="list-style-type: none"> • Super-minimum speed (orange LED “” steady on) • Minimum speed (white LED “” steady on) • Average speed (white LED “” steady on) • Maximum speed (white LED “” steady on)






Attention!!!





From the keys on the device, it is not possible to select humidity control or ventilation only.

18.2 LED ON MACHINE

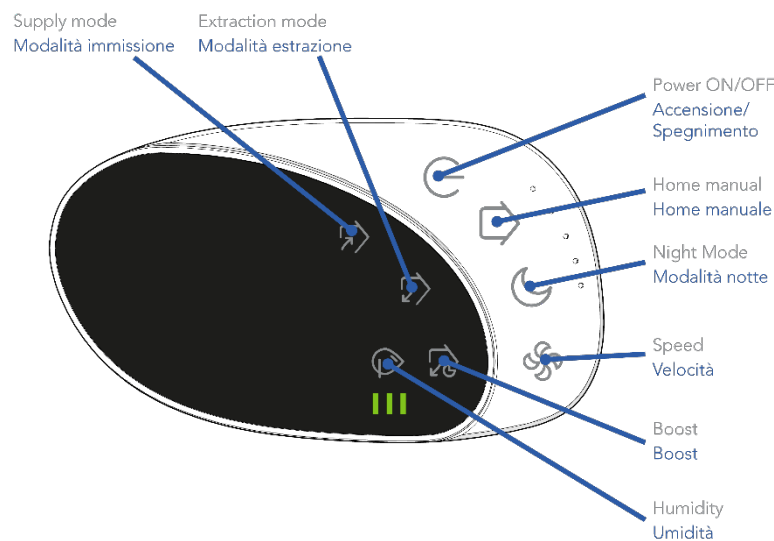
The leds on board are located on the left side of the device.
The leds indicate in which mode the VMC PUNTUALE is operating in that moment.






Led	Description	Function
	Home mode	<ul style="list-style-type: none"> Led on: Standard operating mode, any fan speed can be selected manually. In this mode, the fan alternates the air intake and expulsion phases, and heat recovery is active (unless the ventilation LED is on)
	Humidity mode	<ul style="list-style-type: none"> Led on: humidity control is active, room humidity is not above the set threshold, it is possible to choose the fan operating speed. Flashing led: The preset humidity threshold has been exceeded, VMC PUNTUALE activates the maximum speed until the humidity returns below the preset threshold. <p>Humidity control and the relative threshold can only be set from the remote control. Humidity control is incompatible with the night function.</p>
	Night time mode	<ul style="list-style-type: none"> LED on: the night function has been activated. In this mode, the twilight sensor reduces the speed to a "super minimum" level, so as not to disturb sleep. When this mode is active, at night all the LEDs on the machine go off and the fan continues to operate. Led off: the night function is not active
	Minimum speed	<ul style="list-style-type: none"> Orange led: super-minimum speed active White LED: minimum speed active
	Medium speed	<ul style="list-style-type: none"> White LED: medium speed active







Led	Description	Function
	Full speed	<ul style="list-style-type: none"> White LED: maximum speed active
	Ventilation	<ul style="list-style-type: none"> LED on: the fan works in the direction of extraction only Flashing LED: the fan works in the direction of input only. <p>The choice between input or output in this mode is made through the remote control with the appropriate buttons</p> <ul style="list-style-type: none"> Led off: the fan works alternately, recovering the heat.
	Alarm	<ul style="list-style-type: none"> Led on: Generic device error Flashing led: Dirty filters warning
	slave	<ul style="list-style-type: none"> Led off: The device works independently or is a MASTER, it can be controlled by remote control or from the device board. LED on: this recovery unit is a SLAVE, therefore it does not accept direct commands, but the commands must be applied to the relative Master Flashing LED: following receipt of a command, the device signals its refusal, because it is commanded by a Master device or because an external controller is commanding it.

18.3 REMOTE CONTROL



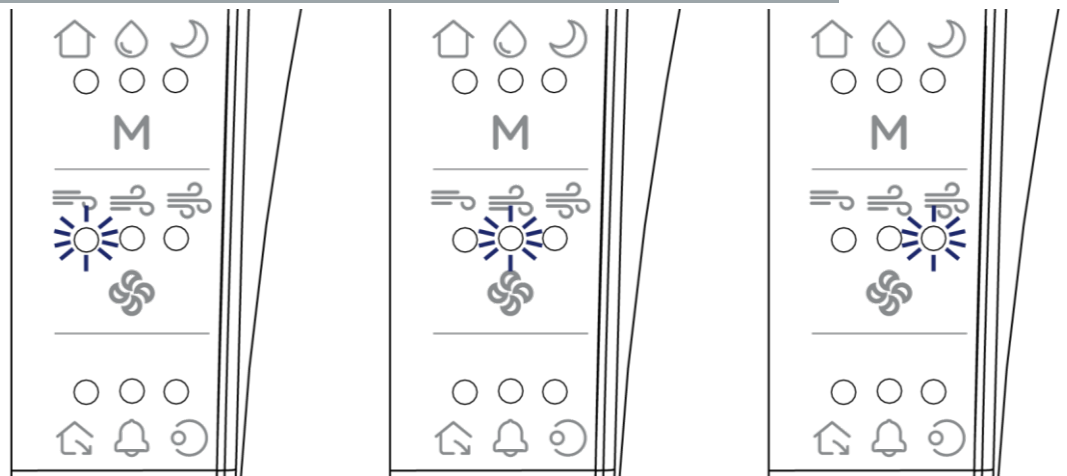
The operating distance of the remote control can be influenced by the environment in which it operates. Possible operations:

Key	Description	Function
	ON/OFF	<ul style="list-style-type: none"> The button  turns the unit on and off
	Home mode	<ul style="list-style-type: none"> Activates heat recovery mode with alternating 60 second extract and supply cycles Return the device to manual home mode Any fill-only, extract-only or extract boost mode are disabled

Key	Description	Function
	Night mode	<ul style="list-style-type: none"> Activate Night Mode: in the dark, the device positions itself in super-minimum speed with active heat recovery. When the room is lit, it restores the manual home mode
	Speed	Change the speed between the various available switching between: <ul style="list-style-type: none"> Super-minimum speed (orange LED "≡☺" steady on) Minimum speed (white LED "≡☺" steady on) Average speed (white LED "≡☺" steady on) Maximum speed (white LED "≡☺" steady on)
	Entry mode	<ul style="list-style-type: none"> Activates fresh air only mode.
	Extraction mode	<ul style="list-style-type: none"> Activates Exhaust Air Only Mode.
	Extraction boost	<ul style="list-style-type: none"> Turn on the Extraction Boost Mode: the device runs at maximum speed in ejection for 1/2 hour. The speed LEDs flash and the ventilation LED is on steady
	Humidity	<ul style="list-style-type: none"> Activates or deactivates the humidity control, three bars light up on the remote control to indicate the humidity threshold (1 cleat: low desired humidity, the device will activate the maximum speed frequently – 3 cleats: high desired humidity – the device will rarely activate the maximum speed)

18.4 DAMPER OPENING

A damper closes automatically when the recovery unit is not in operation. When the appliance is switched on, the damper opens and the fan waits for it to be opened. The LED relating to the selected speed flashes for the time required for the shutter to open. Then it becomes fixed and the fan starts.

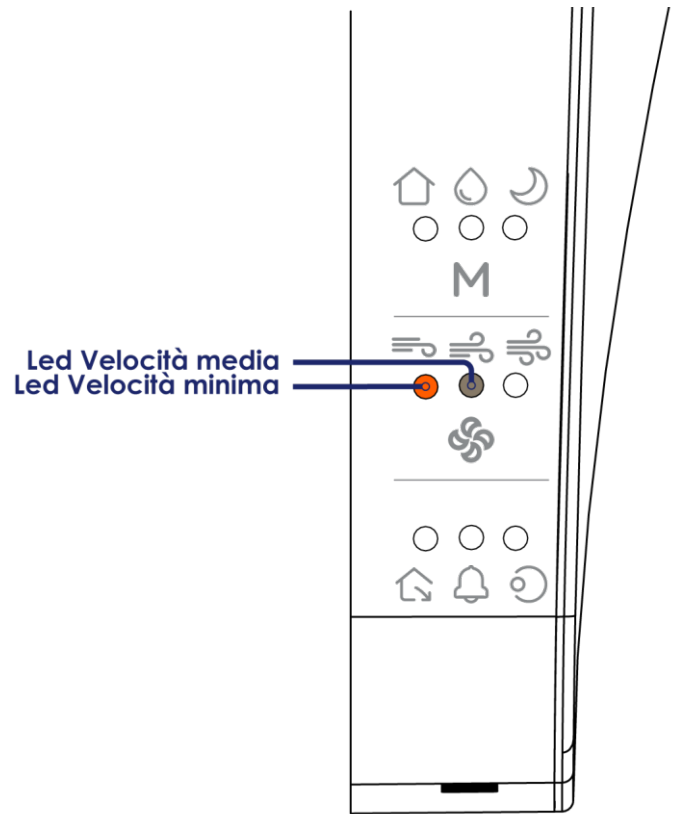


18.5 REMOTE COMMAND

When the remote-control contact is closed, VMC PUNTUALE does not accept commands from the remote control and from the machine.

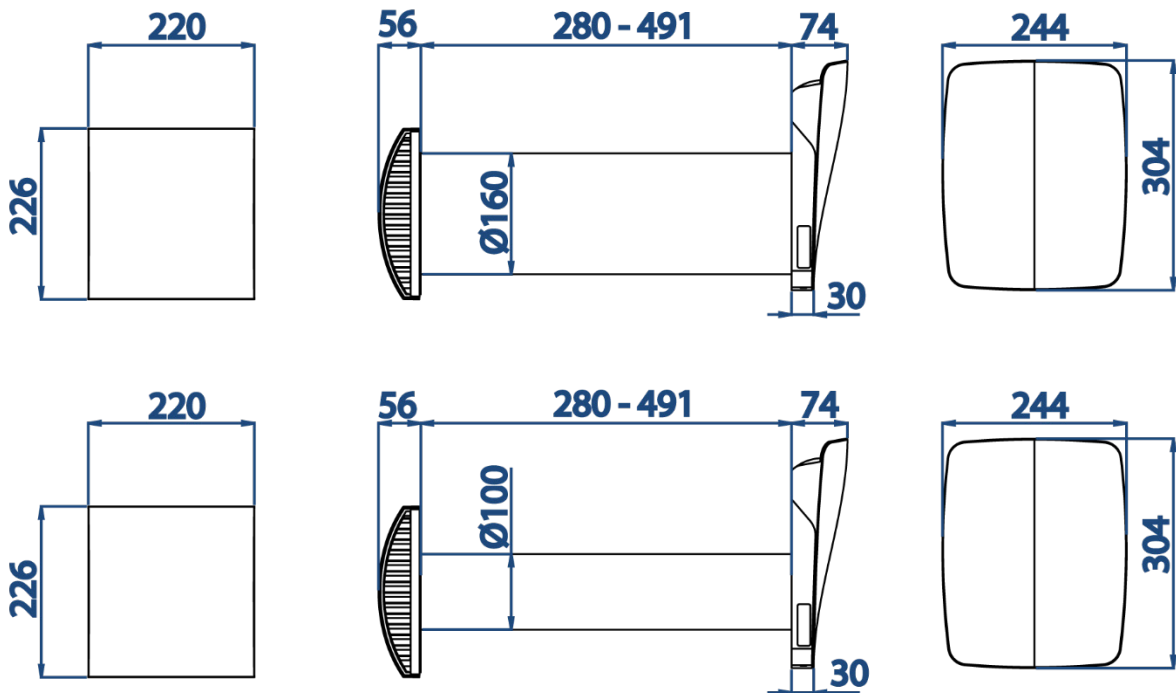
The active remote control is signaled by an orange minimum speed LED and a white average speed LED. When the device receives the command, heat recovery is active at medium speed.

When the device is not receiving the command, it switches off, from that moment it is possible to control it manually from the buttons on the machine or from the remote control by pressing the On/Off button twice. If the remote control is reactivated, it will take precedence over any previous setting.



19. TECHNICAL DATA

19.1 DIMENSIONAL DRAWING



20. AFTER SALES

20.2 TROUBLESHOOTING

The most common causes that can cause blocking of the unit, or at least malfunctioning, are listed below. The subdivision is made on the basis of easily identifiable symptoms.

NR	ANOMALY	POSSIBLE CAUSES	CORRECTIVE ACTIONS
1	The unit does not start.	No power supply to the unit.	Check for their presence on the power terminals.
		One or more speed LEDs flash	Wait until the damper is fully open
		Motor blocked, impeller clogged.	Turn off the unit. Clear engine jam, clean propellers. Restart the unit.
2	Low air flow	Speed set too low.	Choose a higher speed
		The filter, of the fan or of the exchanger, is dirty	Clean or replace the filters, clean the fan and the recovery unit (see the maintenance chapter).
3	The circuit breaker trips	A short circuit has produced an overcurrent.	Turn off the unit and contact a service center.
4	The device does not apply the commands sent from the remote control	The remote-control battery may be flat. The remote does not flash when it sends the pulse to the device.	Replace the remote-control batteries
		The device is a slave, it emits three beeps to refuse the command and the Slave LED flashes three times	None – expected behavior for a slave device. Command the master
		The device is controlled by an external contact, the medium speed LED is on white and the super minimum speed LED is on orange	None – expected behavior for a device commanded by external control. Disable external control to be able to operate the device with the remote control
		The device is in stand-by commands other than switching on are rejected with two beeps.	Turn on the device using the power key on the remote control or using the keys on the machine
5	Vibrations and noises	The fan is dirty	Clean the fan
		The screws of the housing or of the outer cap are loose.	Tighten the drive and outer cap screws.
		Deformation of the motor unit: the fan blades touch the pipe.	Loosen the fixing screws and shim
6	Alarm led on	If the LED is flashing, the filters are dirty	Clean or replace the filters, clean the fan and the recovery unit (see the maintenance chapter).
		If the LED is on steady: generic alarm	Call for assistance

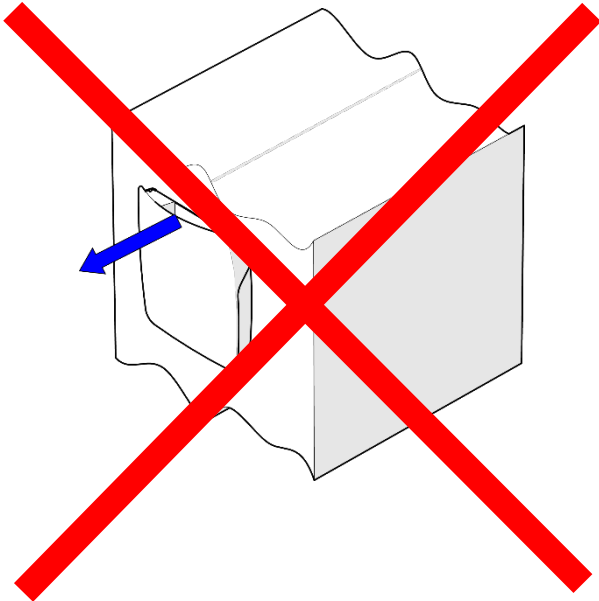
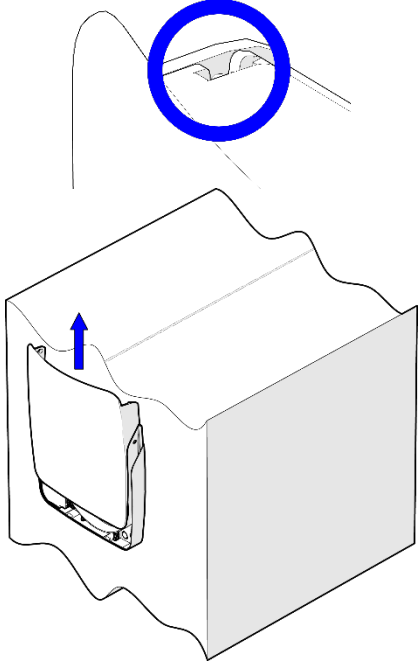
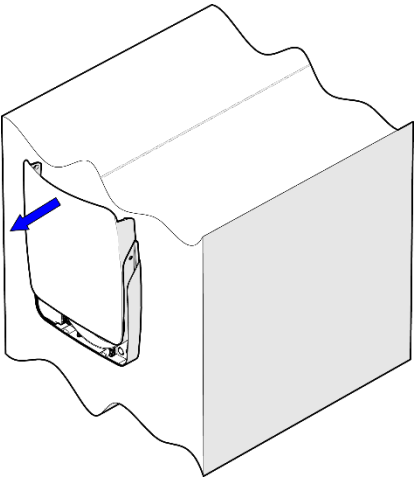
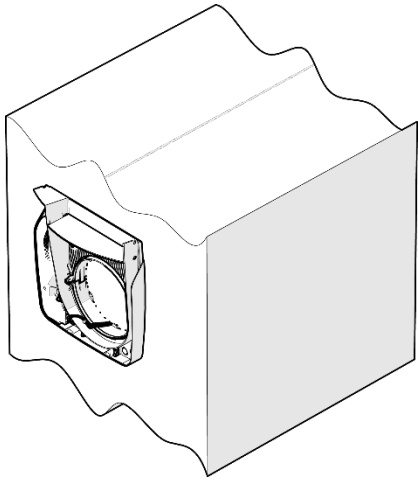
20.3 ORDINARY MAINTENANCE

Disconnect the unit from the mains before any maintenance operation.

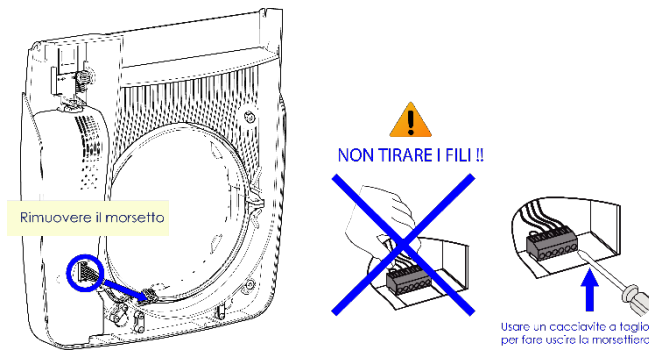


Correct operation of the appliance requires regular cleaning of the filters or their replacement when necessary. Clean the fan impeller and the ceramic heat exchanger from any dust that may settle over time.

Perform the following steps:

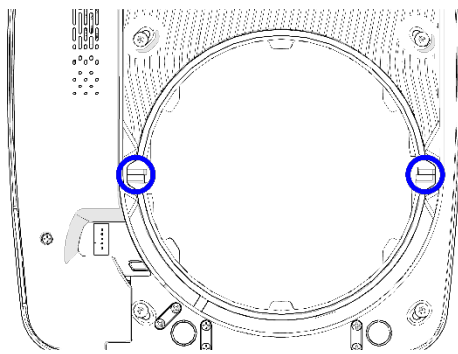
Internal unit front removal - 1	Internal unit front removal - 2
	
<p>To access the electrical connection terminal block, remove the front panel according to following steps. Avoid pulling the front towards you before releasing it.</p>	<p>Slide the front face up until the locking pins are released</p>
Internal unit front removal - 3	Base
	
<p>Having released the locking pins, pull the front towards you.</p>	

Ventilator disconnection

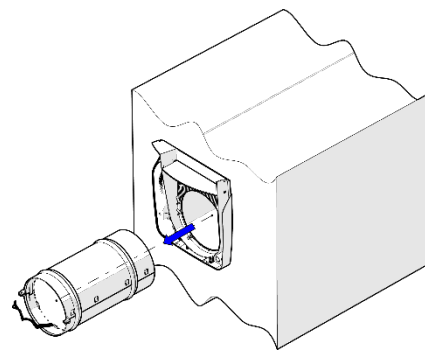


Disconnect the terminal block with the help of a screwdriver. Do not pull the wires to avoid damaging the appliance.

Central body extraction - 1

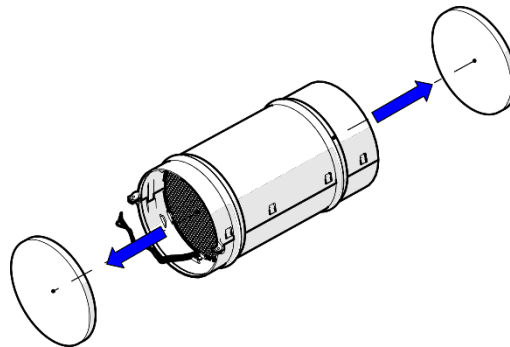


Central body extraction - 2



Extract the body of the appliance with the help of the two protrusions present.

Cleaning



Remove the filters from the body

Filter cleaning and alarm reset


Clean the filters with water and let them dry.

The filters must only be reinserted completely dry.

Alternatively, the filters can also be cleaned with a vacuum cleaner.

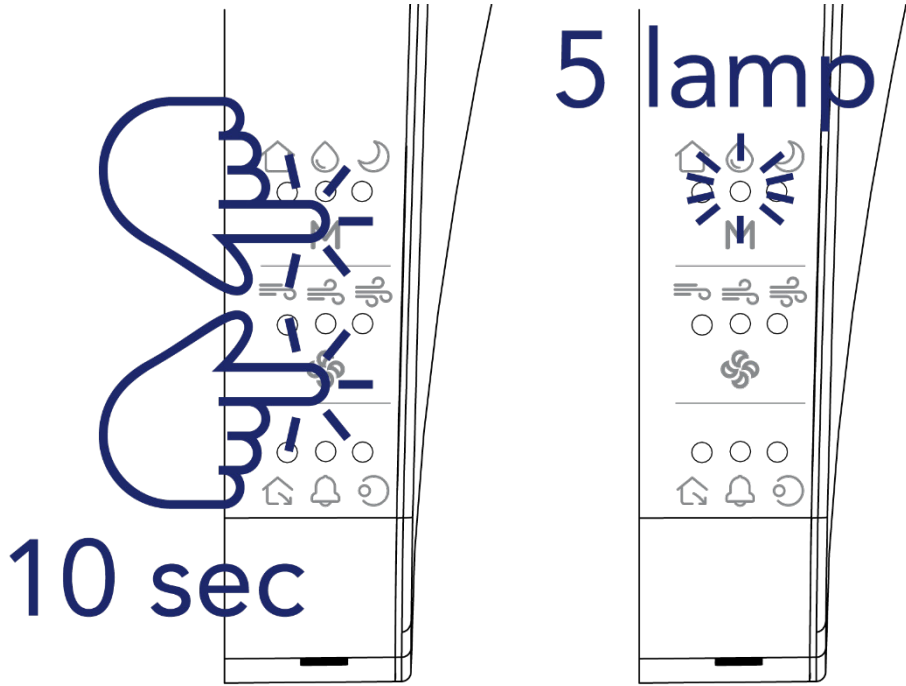
The life of the filters, maintained in this way, is approximately three years.

To remind you of cleaning, a red LED on the appliance is activated by a timer after about 3 months of operation.

To reset the filter cleaning timer, keep the buttons on the machine pressed simultaneously for at least 10 seconds **M** And . The "humidity" LED flashes 5 times, the device restarts and the filter cleaning timer is reset.

Cleaning the ceramic heat exchanger

Over time, dust could accumulate on the ceramic heat exchanger, even with regular maintenance of the filters. Clean the ceramic heat exchanger with a vacuum cleaner, without opening the central body, in order to ensure high energy recovery efficiency.



Remote control battery replacement (if necessary)

If the device no longer responds to the remote control, the battery may be flat: gently slide the battery container located on the back of the remote control, also with a screwdriver. The battery is of the **CR2032** type.

Battery removal	Inserting new batteries
<p>Remove the battery compartment cover located on the rear side of the remote control as shown in the figure. Remove used batteries and dispose of them properly.</p>	<p>Insert the new CR2032 batteries into the compartment with the positive "+" side showing. Insert the guide teeth correctly and close the lid</p>

Checking and cleaning the external grate

Over time, the external grille could become clogged with leaves or other objects which would reduce the air flow and therefore the performance of the device. Check the outdoor grille for blockages at least twice a year and clean as needed. If a flexible grille is fitted, which is inaccessible from the outside, it must be disassembled from the inside, to be cleaned from the inside with the use of a vacuum cleaner.

21. PUTTING THE UNIT OUT OF SERVICE

When VMC PUNTUALE is removed, the structure and the various components, if unusable, must be demolished and divided according to their product category.



22. INSTALLATION


22.2 PREMISE

INSPECTION

Upon receipt of the unit, check its integrity: the machine has left the factory in perfect condition; any damage must be immediately reported to the carrier and noted on the Delivery Note before countersigning it.

LIFTING AND TRANSPORT


When unloading and positioning the unit, the utmost care must be taken to avoid sudden or violent maneuver. Internal transport must be carried out carefully and delicately, without using the machine components as strengths.

 In all lifting operations, make sure you have firmly anchored the unit, in order to avoid accidental overturning or falling.

UNPACKING

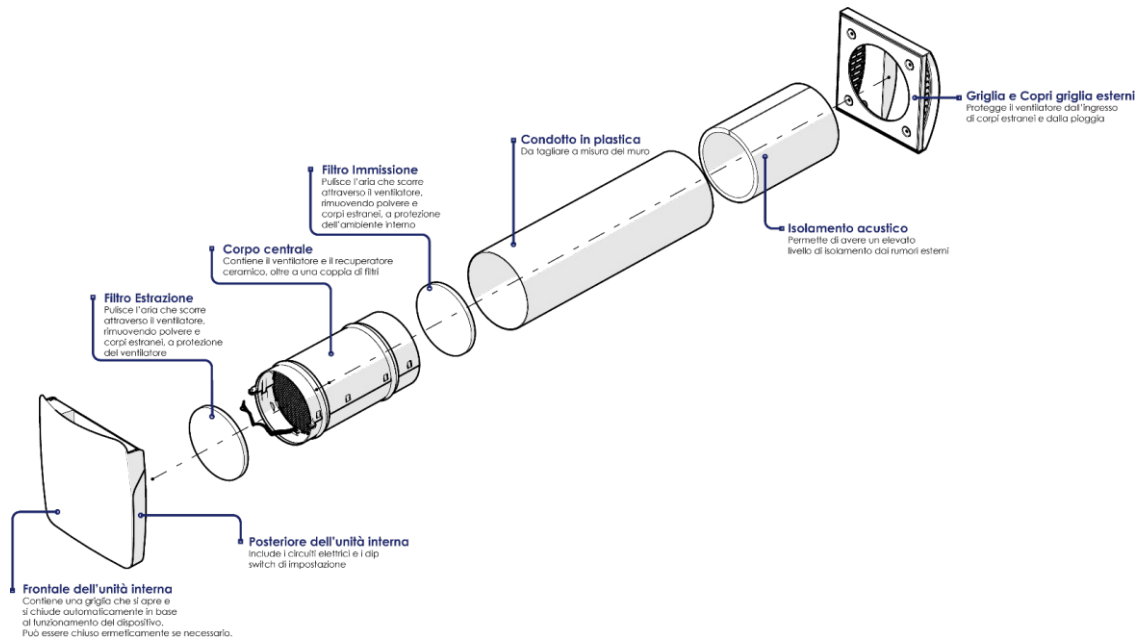
The packaging of the unit must be removed with care without causing damage to the machine; the materials that make up the packaging are of a different nature, wood. It is good practice to keep them separately and deliver them for disposal or possible recycling to the companies responsible for the purpose.

22.3 PLACEMENT

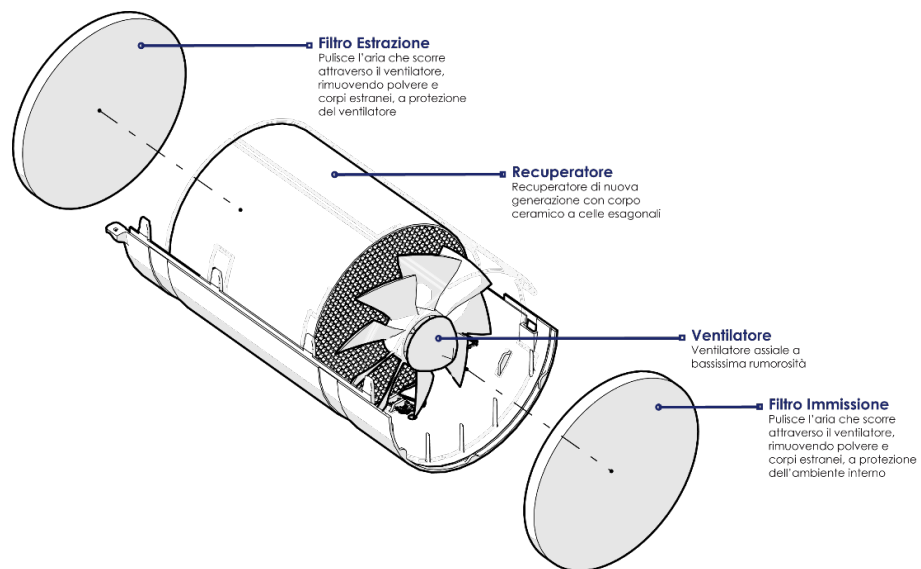
 All models are designed and built for installation in perimeter walls at a minimum distance of 16 cm from the ceiling.
It must not be exposed to aggressive atmospheric agents and excessive temperatures (-20°C to +50°C). If installed in the shade, the night function may not be activated.

EXPLODED

Total

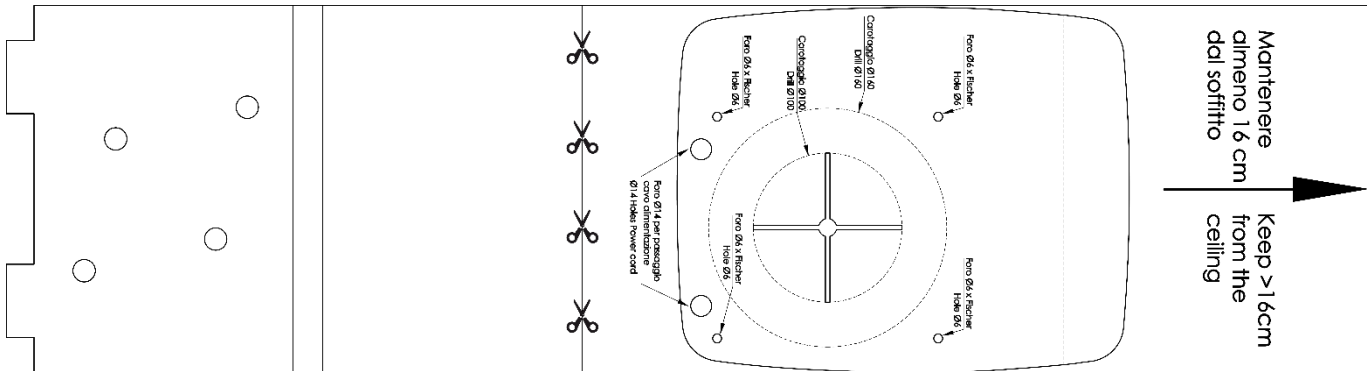


Central body

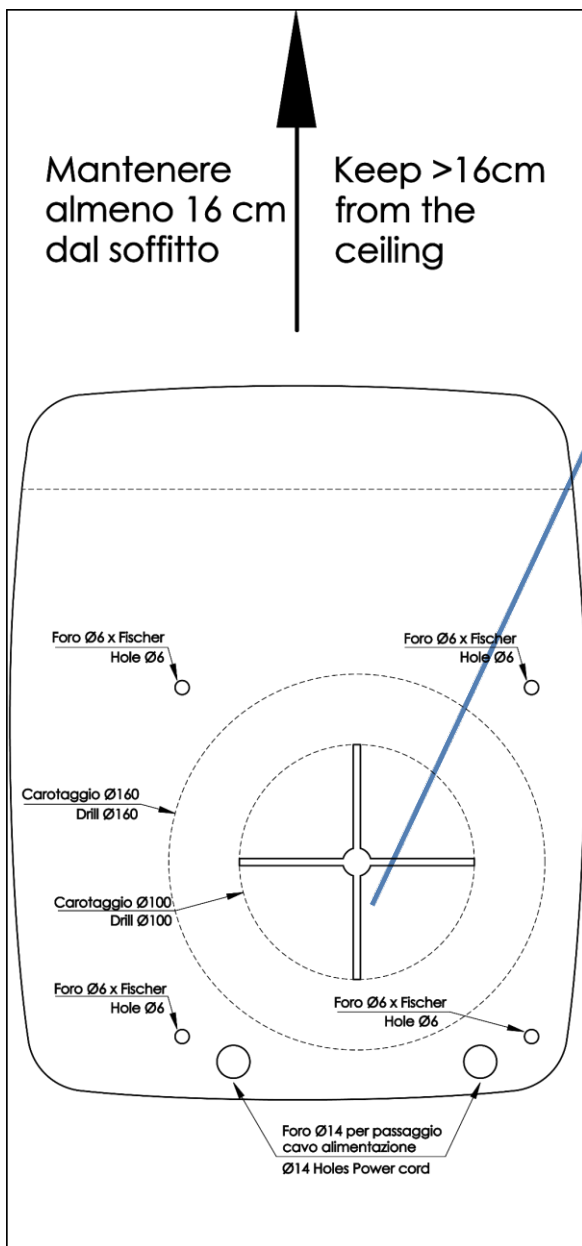


Assembly template positioning

The template useful for assembling the front panel is printed on an inner carton, part of the packaging. For the external hood it is not necessary to resort to a template: the wall part of the hood can be used directly.

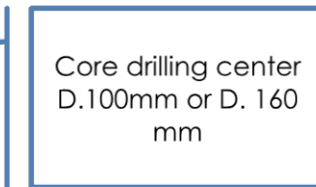


Having identified the template, cut out the excess part, as  indicated.



The minimum distance from the ceiling (at least 16 cm) is shown on the template.

Place the cardboard template on the inside wall and fix it temporarily (for example, with adhesive tape).



Forum preparation

Prepare a through hole in the wall with a minimum diameter of 102 or 162 mm (depending on the model to be installed), inclined outwards with a slope between 2° and 3°.

Insertion of telescopic duct

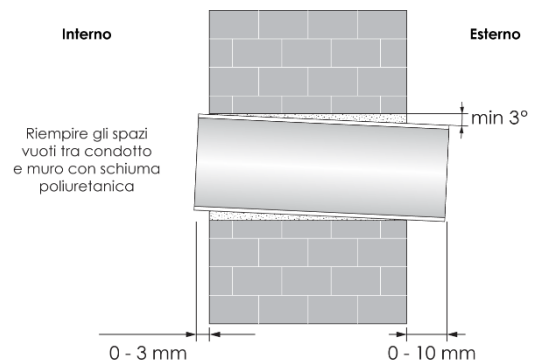
When several devices are installed in series (see specific chapter) it is necessary to prepare passages for the connection cables between one device and the other, as well as for the power supply cable.

The duct must be flush with the internal wall (maximum protrusion 3 mm) and must protrude from the external wall by a maximum of 10 mm.

Keep an outward inclination of 2° and 3°, to prevent possible condensation from flowing inwards.

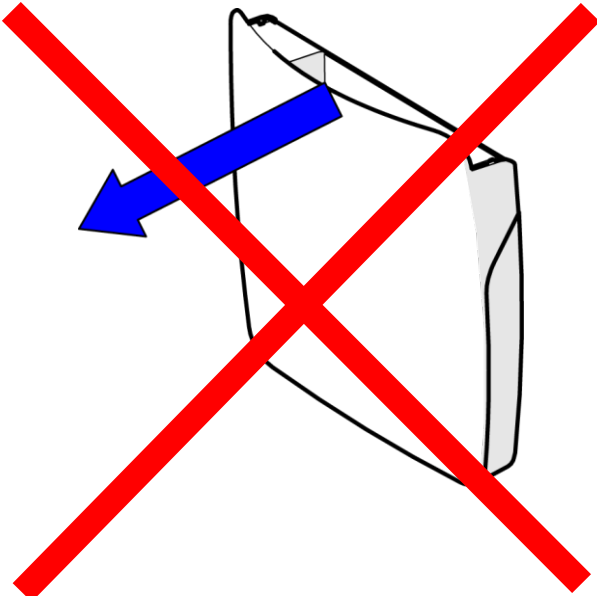
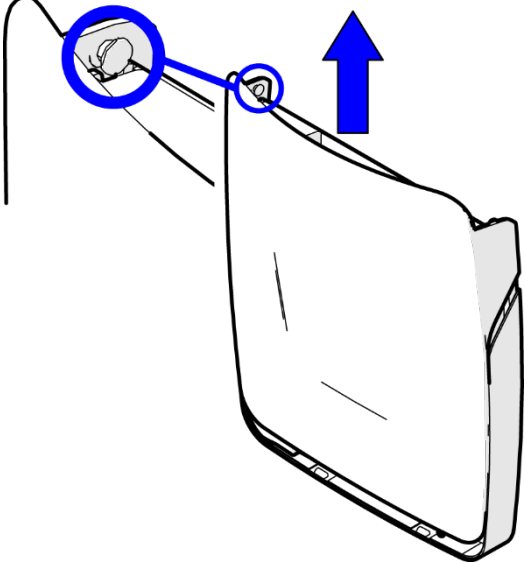
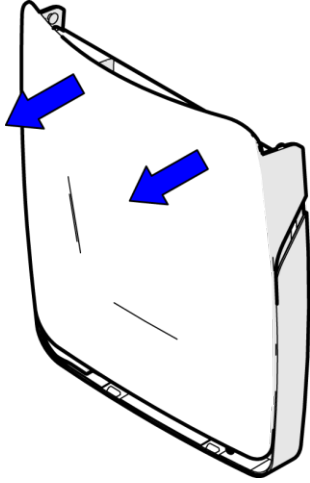
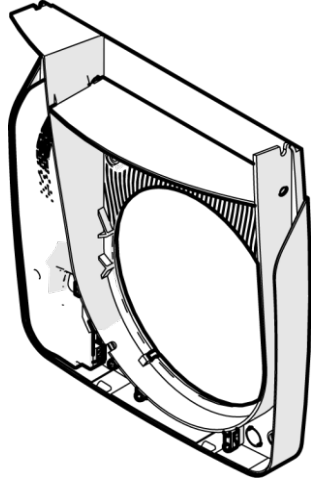
Fill the space between the plastic duct and the wall hole with an insulator, such as polyurethane foam.

Aligning the center hole of the template with the plastic conduit, mark the location of the four supplied Fisher wall plugs. A fifth and

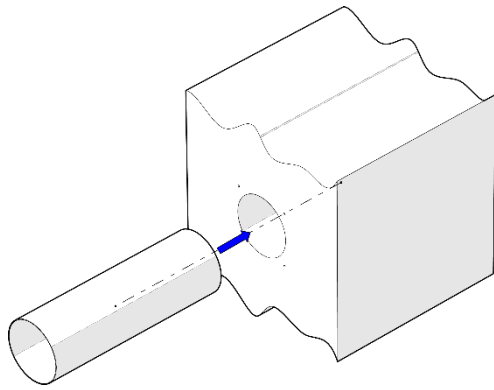


sixth hole on the template indicates the points where the power cable and control cables must come out of the wall (only if multiple devices are installed in cascade). If you use these steps, the cables are hidden from view. If left in sight, the power supply cable can enter through the cable gland located on the lower side of the fan unit.

Indoor unit installation

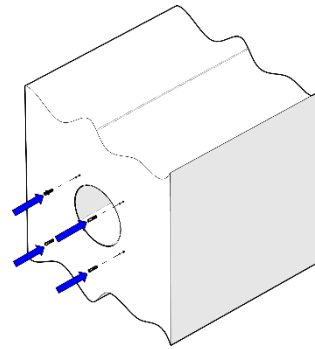
Indoor unit installation - 1	Indoor unit installation - 2
	
<p>To open the front lock perform the following steps. Avoid pulling the front towards you before releasing it.</p>	<p>Slide the front face up until the locking pins are released</p>
Indoor unit installation - 3	Indoor unit installation - 4
	
<p>Having released the locking pins, pull the front towards you.</p>	<p>The base is free and ready to install</p>

Indoor unit installation - 5



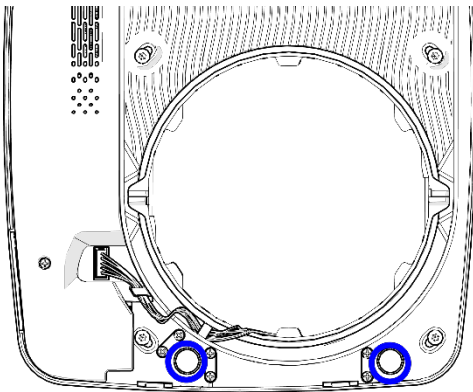
Insert the supplied duct into the hole prepared in the wall and seal the remaining gap between the duct and the wall with polyurethane foam (not supplied)

Indoor unit installation - 6



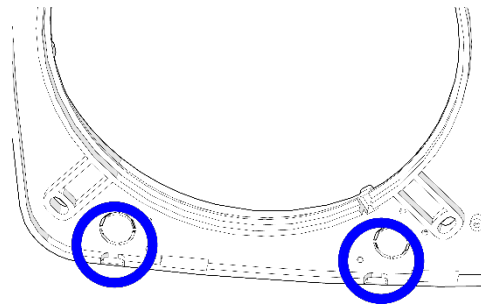
Insert the 4 plugs provided

Power cable routing - 1



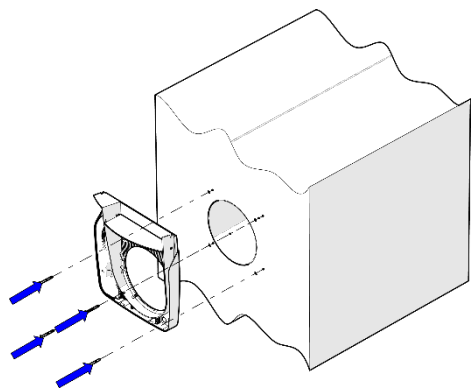
The power cables can pass through the pre-cuts indicated in the figure.

Power cable routing - 2



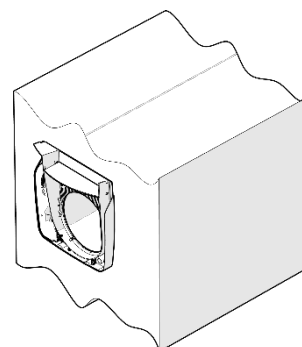
When it is not possible to reach the rear directly from the wall, passages are provided (to be detached during installation), to bring the cable from below, visible in the room.

Indoor unit installation - 7



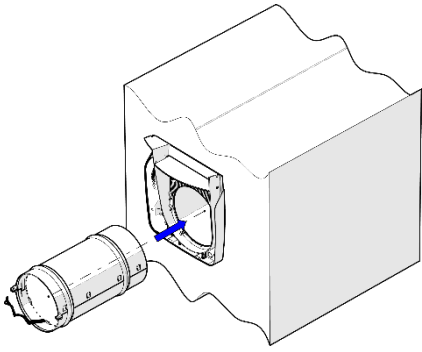
Apply the base to the wall with the 4 screws provided

Indoor unit installation - 8

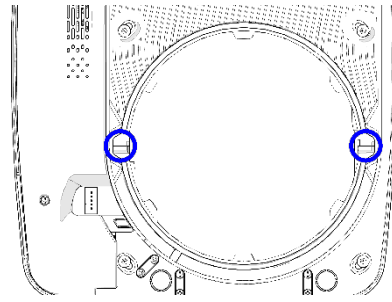


The base is fixed. Check that the base is flat and not deformed

Insertion of the central body - 1



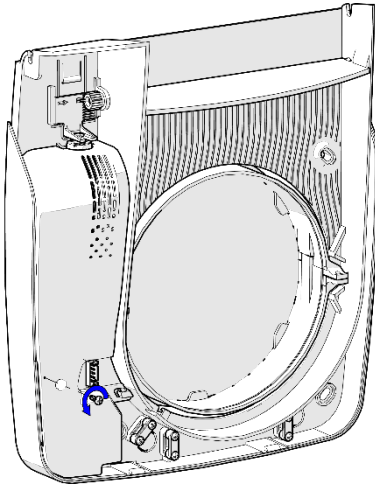
Insertion of the central body - 2



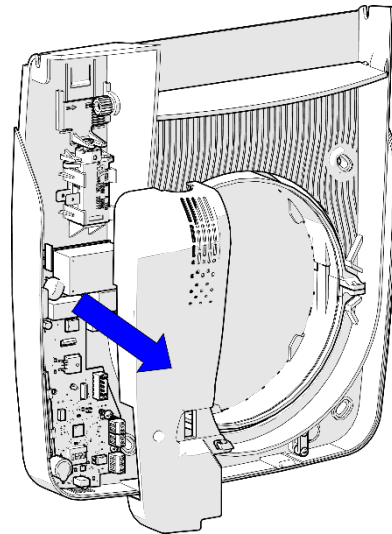
Insert the central body into the duct with the fan cable down and the 2 gripping tabs (right and left) centered as shown.

Check the correct positioning of the sealing gaskets

Card cover removal - 1

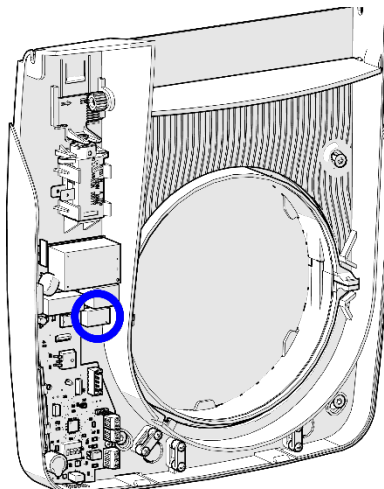


Card cover removal - 2



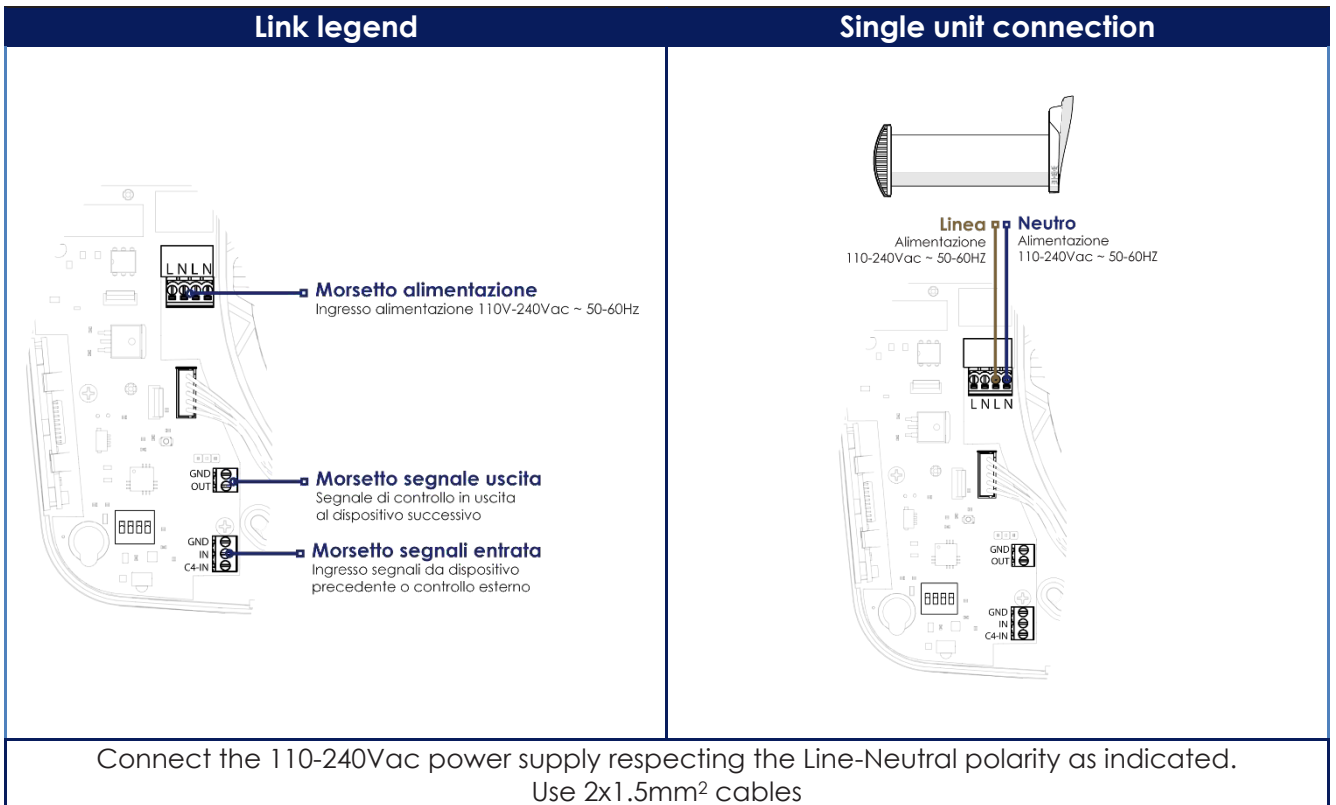
Remove the semi-transparent cover held by the fixing screw

Card cover removal - 3

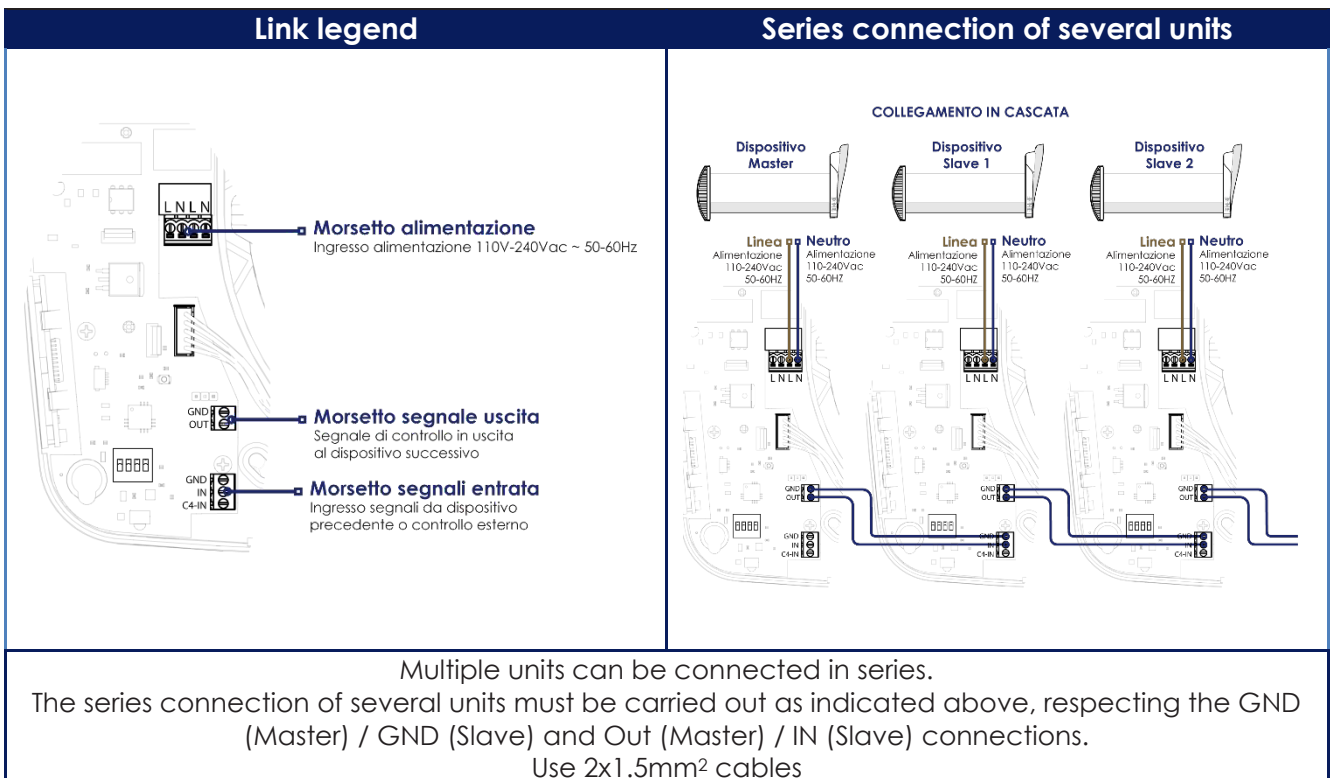


The figure shows the power supply terminal

SINGLE UNIT WIRING DIAGRAM

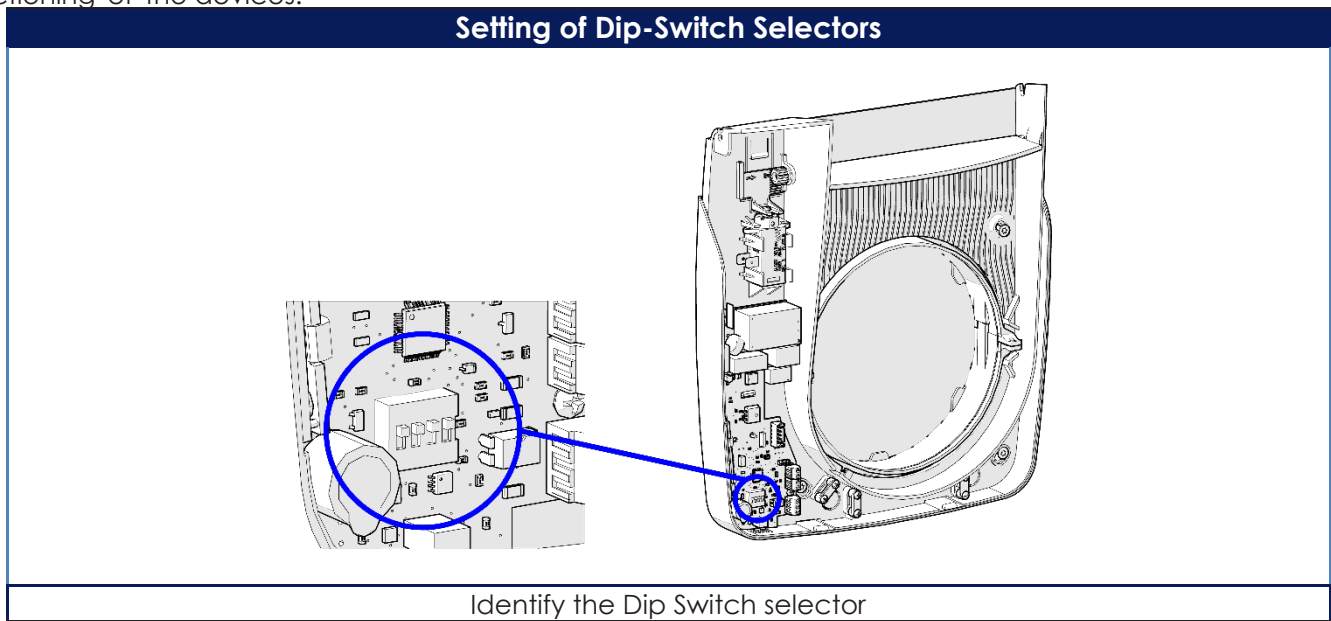


WIRING DIAGRAM FOR SERIES CONNECTION (CASCADE) OF SEVERAL RECOVERY UNITS (max.n°10)





When multiple VMC PUNTUALE are cascaded together, all are managed by the first (master) and its user control.

The units must be set so that the injections and extractions are not simultaneous so as not to put the environment under pressure or depression. A series of dip-switches allows you to program the correct functioning of the devices.





The meaning of each dip-switch is as follows:

Selector 1: Direction of air flow in ventilation only



Position	Meaning
 1	Entry In ventilation only mode, the direction of the air flow will be towards the room. In heat recovery mode, the device will start from the input phase.
 1	Extraction In fan only mode, the air flow direction will be out of the room. In heat recovery mode, the device will start from the extraction phase.

Selector 2: Master/Slave selection

Position	Meaning
 2	MASTER device In cascade installations only the first "MASTER" must have Dip 2 in the OFF position. This device will be the only one in the cascade capable of receiving commands.
 2	SLAVE device In cascade installations, the devices, excluding the first, must have Dip 2 in the OFF position. These devices will not be able to receive commands as they depend on the MASTER.

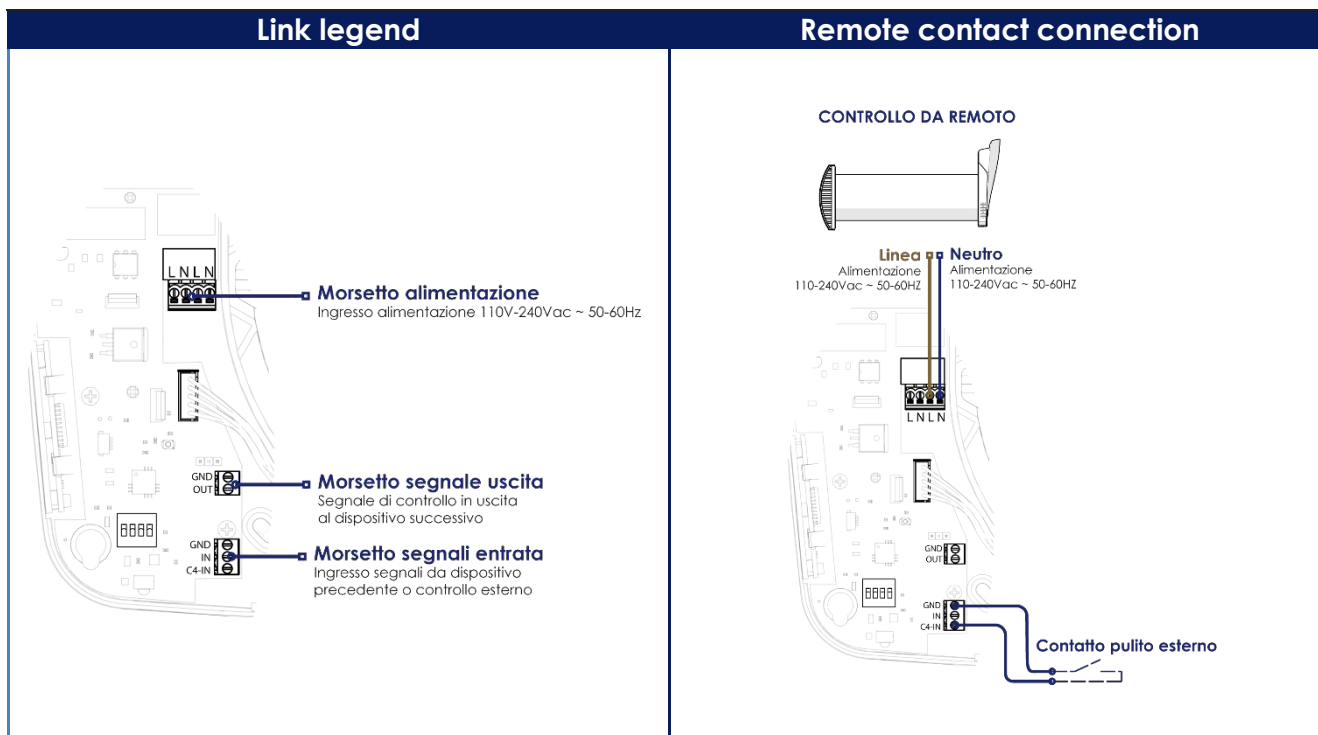
Selector 3: Do not use (indifferent position)

Selector 4: fixed for each model

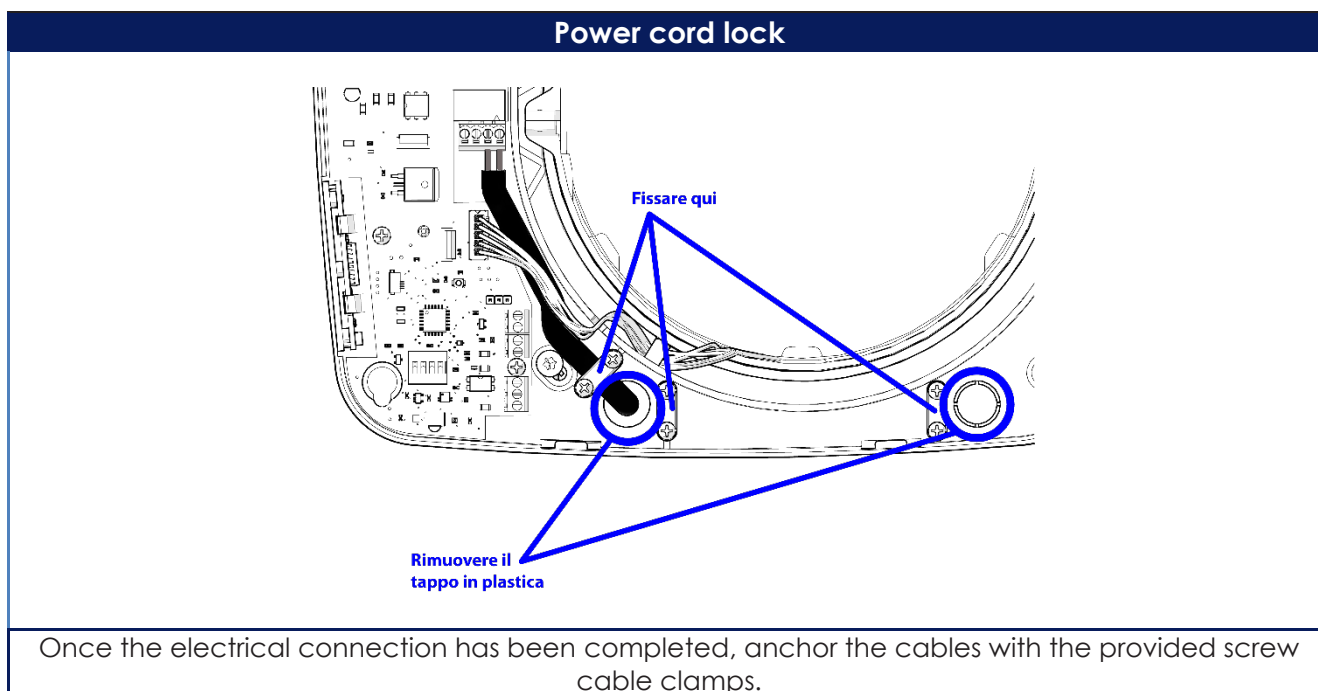
Position	Meaning
 4	Kers 50+ device Parameter setting for DN 160 device
 4	Kers 25+ device Parameter setting for DN 100 device

In order not to send the environment under pressure or depression, the cascade sequence can be, for example, the following: first device = switch 2 down (OFF); second device = switch 2 up (ON); third device = switch 2 down (OFF); fourth device = switch 2 up (ON) and so on.

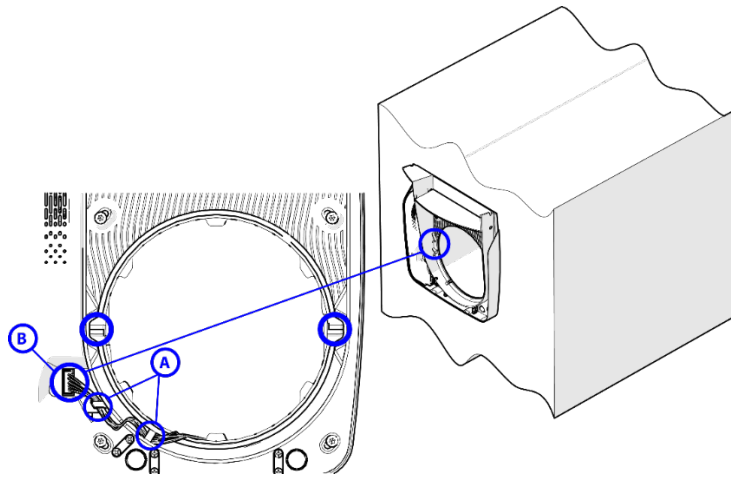
WIRING DIAGRAM OF CONNECTION THROUGH EXTERNAL CONTACT



When this contact is used, the other functions are deactivated.
 With the contact closed, heat recovery is activated at medium speed and the commands both from the machine and from the remote control are inhibited.
 With the contact open, the recuperator is in stand-by and the controls on the machine or the remote control are reactivated.

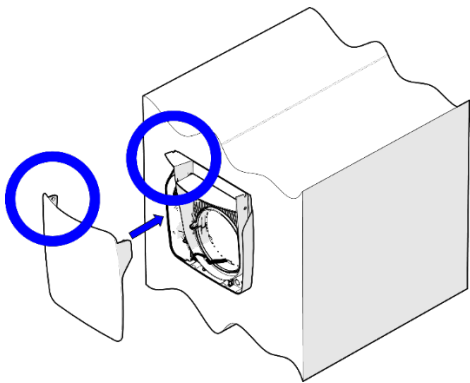


Motor cable connection

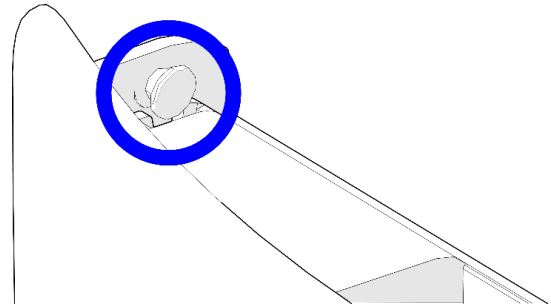


Insert the plug of the fan cable into the socket (position "B").
Insert the fan cable under the clips (positions "A").

Front installation - 1

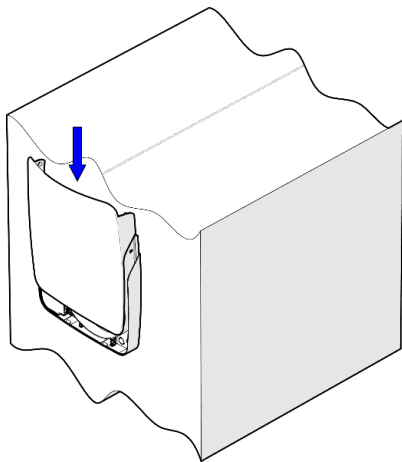


Front installation - 2

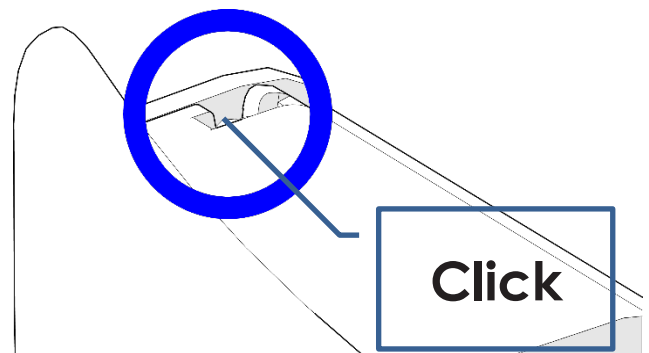


Rest the front panel on the indoor unit and center the pin in its seat

Front installation - 3

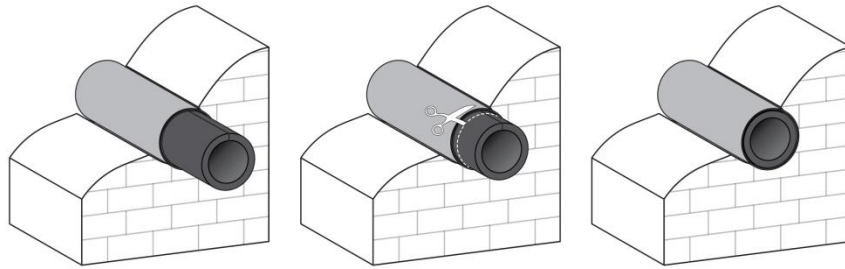


Front installation - 4



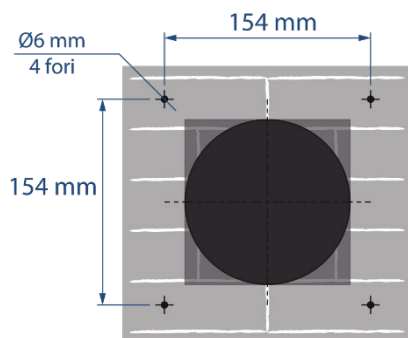
Push the front panel downwards until the pin engages. "CLICK"
Push down on the wall for complete locking.

Acoustic insulation insert



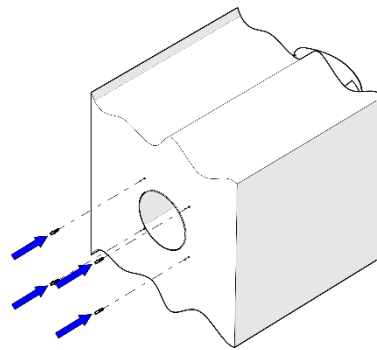
Roll up and insert the sound insulation into the duct. Insert the insulation inside the duct for the first time up to the stop. Mark the section of insulation to be removed on the circumference of the insulation so that it is flush with the duct. Extract the insulation and cut the excess part. Then insert the insulation back into the duct.

External hood installation - 1



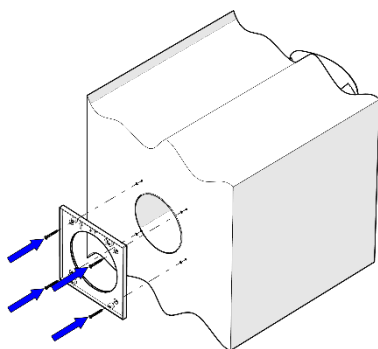
Prepare 4 holes D.6 mm as shown in the image. For template use the back of the hood itself..

Outdoor hood installation - 2

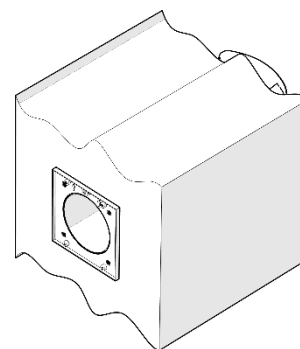


Insert 4 dowels provided

Outdoor hood installation - 3

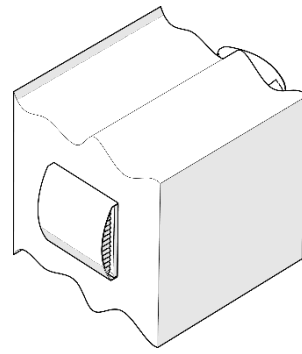
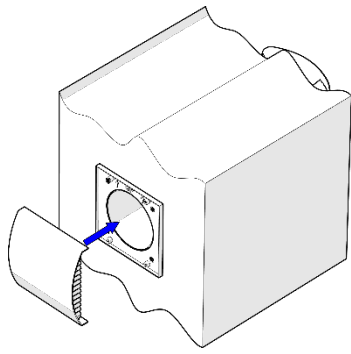


Outdoor hood installation - 4



Screw the rear of the hood to the external wall with the 4 4x40 mm plug screws. Keep the insulation towards the wall and the "UP" symbol facing upwards

External hood installation - 5



Mount the rack on the pegs of the plate, with the "UP" label facing up

23. INDOOR INSTALLATION USING FLEXIBLE GRILLE

For the installation of hoods on inaccessible external walls, special flexible grille (optional) are available, which can be installed from inside. The flexible grids are as follows:

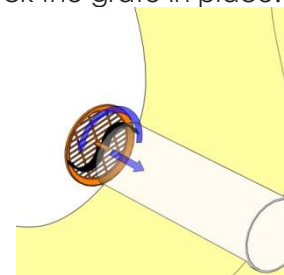
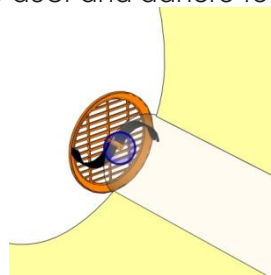
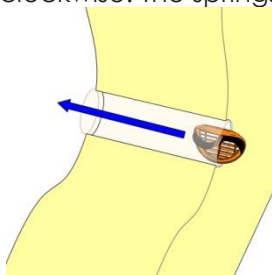
CODE	DESCRIPTION
VTGF01	FLEXIBLE OUTDOOR GRILLE DN 100 WHITE
VTGF02	FLEXIBLE OUTDOOR GRILLE DN 100 COPPER COLOR
VTGF03	FLEXIBLE OUTDOOR GRILLE DN 160 WHITE
VTGF04	FLEXIBLE OUTDOOR GRILLE DN 160 COPPER COLOR

Warnings

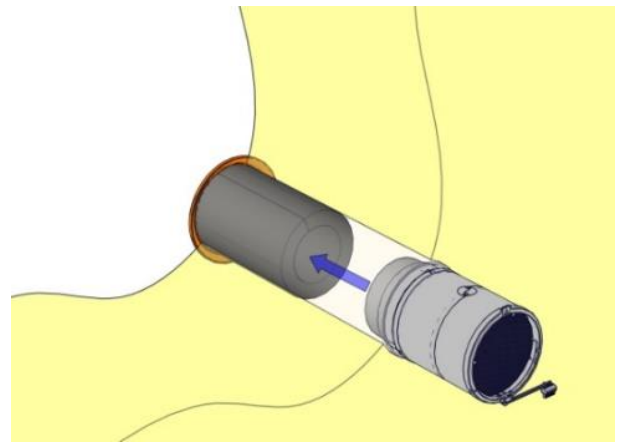
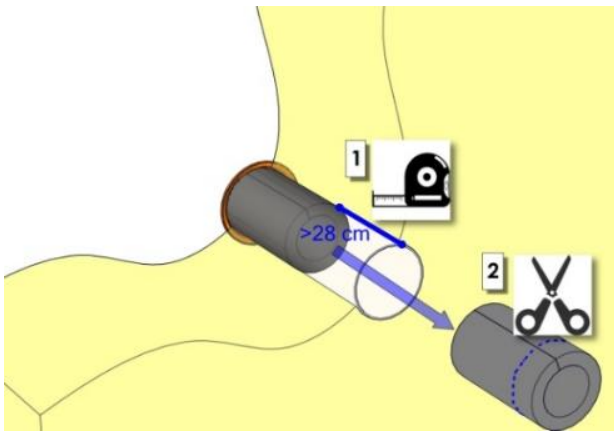
 There is a risk of the grille falling out during installation. Make sure that this eventuality does not cause damage to people or things, possibly cordoning off the area outside. The grill supplied with the appliance must not be used if you opt for the flexible grills.

Installation of the flexible external grille

Slightly flex the grate and slide it into the duct. Holding it firmly by the center peg, push it completely out of the duct so it can expand and return to its original shape. Pull towards you and at the same time rotate the grill counterclockwise. The springs retract into the duct and adhere to the wall, and lock the grate in place.



Roll up the insulation and insert it a first time inside the duct up to the stop. Measure the distance that separates the insulation from the entrance to the duct: it must be at least 28 cm. If it is less, extract the insulation and cut off the excess. Insert the insulation back into the duct. Insert the central body of the device, which must abut without pushing the grille out.



24. THICK WALL DUCT

If the wall thickness is greater than the length of the normal duct supplied with the appliance (50cm), an 70cm duct is available.

25. WARRANTY CONDITIONS

The guarantee of this product is governed by the Ideal Clima general conditions of sale (version 3.0) of which we report the part relating to the guarantee:

Ideal Clima guarantees its products for faults or manufacturing defects, with the express exclusion of any fault or fact inherent in the installation, operation and maintenance of the product. - 15.2 Recipients - Ideal Clima supplies products only to professional companies. By placing the order, the Customer declares that the products are intended for use in the context of his professional, commercial or entrepreneurial activity. The application of the 1999/44/EC standard and of the Legislative Decree is therefore excluded. no. 24 of 2 February 2002. The guarantee is limited to the products supplied by Ideal Clima and only to the Customer. Ideal Clima reserves the right to apply its warranty conditions, directly or indirectly through subjects identified by it, to the end user only upon explicit request and authorization of the Customer, who in any case remains entitled to the fulfillment of any obligations with the end user pursuant to the legislation in force. - 15.3 Performances under guarantee - The intervention under guarantee implies, at the unquestionable judgment of Ideal Clima, the repair or replacement of the defective product. In the event of repairs, the Customer undertakes to have those repairs that Ideal Clima deems indispensable carried out by its end customer, allowing them access to the system. In case of replacement, Ideal Clima undertakes to replace its defective products with other products of its own with equal or superior characteristics, excluding any cost of restoring the goods (labour, travel, transport, works, etc.). In any case, production defects must be recognized by Ideal Clima technicians. The components replaced under warranty remain the property of Ideal Clima, to which they must be returned carriage paid. - 15.4 Effective date and duration - The guarantee starts from the date of purchase of the product and lasts for two years. The purchase date is proven by the invoice and by the DDT. In the event of a dispute regarding the date of supply, the lot/production date/serial number shown on the product will prevail. The Customer loses the guarantee if he does not report the defect within 8 days of discovery and before the expiry of the maximum duration of the guarantee. The duration of the guarantee is not modified by interventions under guarantee - 15.5 Limitations and exclusions - The guarantee does not cover defects attributable to transport, handling of the product, improper storage (e.g. non-dry environments, direct exposure to the sun, etc.), installation and/or o maintenance not performed by qualified and authorized personnel, according to the manufacturer's instructions and current standards, use that does not comply with the characteristics of the product, use of water, gas and electricity not suitable for the product, improper use or maintenance of the product, normal wear -15.6 Right to call: Ideal Clima reserves the right to request a contribution for the intervention of the authorized technical assistance center starting from the seventh month of the warranty period. This contribution will be quantified in advance and must be paid directly to the CAT. This contribution will be due even if the product is defective.



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